

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER LITTECKE and ANDERS JONSSON

Appeal No. 1996-1699
Application No. 08/077,681¹

HEARD: Jan. 12, 2000

Before, McCANDLISH, Senior Administrative Patent Judge and
ABRAMS and GONZALES, Administrative Patent Judges.

GONZALES, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1 through 5, which are all of the claims pending in this application.

We REVERSE.

¹ Application for patent filed June 16, 1993.

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The appellants' invention relates to a method of removing the binder phase from the surface of a hard material body containing hard constituents in a binder phase (claims 1 through 4) and the product produced by the method (claim 5). Claims 1 and 5 are illustrative of the subject matter on appeal and are reproduced below:

1. A method of removing the binder phase from the surface of a hard material body containing hard constituents in a binder phase based on cobalt and/or nickel, said body having a binder phase enriched surface zone comprising blasting the surface zone using particles having a size of 400 to 1500 mesh.

5. The product of the method of claim 1.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Reed	3,382,159	May 07,
1968		
Oliver	4,272,612	Jun. 09, 1981

Additionally, the examiner relies on the admitted prior art (APA) described on pages 1 and 2 of the appellants' specification.

Claims 1 through 5 stand rejected under 35 U.S.C. § 103 as being unpatentable over the APA in view of Oliver and Reed.

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Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the final rejection (Paper No. 8, mailed October 5, 1994) and the answer (Paper No. 15, mailed September 12, 1995) for the examiner's complete reasoning in support of the rejection, and to the main and reply briefs (Paper Nos. 14 and 17, filed July 5, 1995 and November 13, 1995 respectively) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. Upon evaluation of all the evidence before us, it is

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our conclusion that the evidence adduced by the examiner is insufficient to establish a case of obviousness with respect to claims 1 through 5. Accordingly, we will not sustain the examiner's rejection of claims 1 through 5 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d

1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness

is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. See In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is prima facie obvious must be supported by evidence,

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as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on

§ 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded

assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S.

1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellants' disclosure

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as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. See, e.g., Grain Processing Corp. v. American Maize-Products Co., 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

With this as background, we turn first to the rejection of claim 1, the only independent claim in the application. The examiner describes the APA as teaching the method recited in claim 1, except that the APA method uses particles having "a size of about 150 mesh" rather than particles having a size of 400 to 1500 mesh as required by claim 1 (appellants' specification, page 2 and answer, page 3).

The examiner relies on Reed and Oliver to "demonstrate that one having ordinary skill in the art realizes [sic, would have realized] that use of an abrasive having a relatively large particle size well [sic] result in a more coarse removal of

material relative to an abrasive having relatively small particle size" (answer, page 3). Based on the teachings of the APA, Reed and Oliver, the examiner concluded that it would

have been obvious

to modify Appellant's admitted prior art process by employing alumina grinding media of a smaller particle size once he [a person of ordinary skill in the art] realized that the larger-sized alumina grinding media led to unwanted results, or desired a more exact abrading procedure. The size of the grinding media, i.e. 400-1500 mesh, is deemed obvious because one having ordinary skill in the art would have arrived at this optimal particle size without undue experimentation. (Answer, page 4)

The appellants argue that the applied prior art fails to provide the necessary incentive or motivation for modifying the APA in a manner which would have produced the claimed method (reply brief, page 3). We agree.

We have carefully reviewed both the Reed and Oliver disclosures, but can find nothing in either reference which would have reasonably suggested the claimed method to a person of ordinary skill in the art. We are informed by appellants' specification (page 2) that it is difficult using conventional blasting methods to control the blasting depth, especially close to the cutting edge of the carbide insert, and that conventional

blasting methods result in damage to the carbide grains and

uneven removal of the cobalt layer.

Reed, on the other hand, is concerned with finding a less troublesome method for producing a roughened, non-reflective surface finish on metal trim pieces used, for example, on automobiles and appliances. As described by Reed, the prior art method includes a first plating step followed by a blasting step to roughen the plated surface using a 140 mesh particle size abrasive media followed by a second plating step (Figure 1 and col. 1, lines 43-63). Reed is particularly concerned with controlling blasting depth in order to avoid eroding a first plating layer. However, Reed's solution is to blast prior to applying the first plating layer using a coarser abrasive media than typically used, i.e., 80-100 mesh, and to blast at higher pressure and at closer range.

Oliver discloses a method of making bonded grid-cathode units for microwave triode tubes using erosion lithography (col. 1, lines 13-16). A specific object of Oliver is to provide a grid-cathode structure having a grid pattern with openings of the order of 0.001 inch or less (col. 1, line 66 to col. 2, line 2).

Oliver teaches the desired resolution may be obtained using an air abrasion gun at 30 psi and 600 mesh alumina, (col. 8, lines 17-22). In order to obtain uniform abrasion over the entire exposed surface of the cathode, Olive teaches that it is

necessary to use a rectangular nozzle having a high aspect ratio, as opposed to the circular nozzle used in the prior art, together with scanning of the grid pattern relative to the nozzle (col. 8, lines 34-57).

Contrary to the examiner's position, we do not view Reed or Oliver as suggesting a smaller abrasive media to improve control of blasting depth. In fact, Reed teaches abrading with a coarser media than the prior art, the opposite of the claimed method, while adjusting other blasting variables, such as, blasting pressure and range. Oliver teaches that erosion lithography for the purpose of obtaining very fine detail was a failure, even with 600 mesh alumina, until changes in variables other than abrasive particle size, such as nozzle shape and relative movement between the nozzle and work piece, were made.

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Like appellants, absent the disclosure of the present application, we do not consider that one of ordinary skill in the

art would have been motivated to modify the method of removing binder phase from the surface of a cemented carbide insert of the APA in the manner required to arrive at the method defined in appellants' claim 1 based on the teachings of Reed and Oliver.

For the above reasons, the examiner's rejection of claim 1 under 35 U.S.C. § 103 will not be sustained.

Claims 2 through 4 are dependent on claim 1 and contain all of the limitations of that claim. Therefore, we will also not sustain the standing 35 U.S.C. § 103 rejection of claims 2 through 4.

The issue presented by the examiner's rejection of product-by-process claim 5 under 35 U.S.C. § 103 as being unpatentable over the APA in view Oliver and Reed is an entirely different matter. The examiner bears a lesser burden of proof in making out a case of prima facie obviousness for

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product-by-process claims because of their peculiar nature than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). However, in order to shift the burden of coming forward with evidence to the applicant to establish an unobvious difference between the claimed product

and the prior art product, the examiner must provide a rationale tending to show that, although produced by a different process, the claimed product appears to be the same or similar to that of the prior art. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). In this case, no such rationale has been set forth by the examiner. Therefore, the burden of proof has not been shifted to the appellants. Furthermore, we are informed by appellants' specification that inserts subjected to the claimed method have carbine grains which are "almost undamaged and very few cobalt areas remained" as compared to an insert produced according to the prior art method (specification, page 5). Having no reason to doubt the

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objective truth of the statements made in appellants' specification, we are of the opinion that structural differences do exist between the product made by appealed claim 1 and the method of the APA.

In view of the above, the examiner's rejection of claim 5 under 35 U.S.C. § 103 will not be sustained.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 through 5 under 35 U.S.C. § 103 is reversed.

REVERSED

HARRISON E. McCANDLISH)
Senior Administrative Patent Judge)
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JOHN F. GONZALES)	
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